

The importance of sport activities to stimulate an educational management of students with SLD

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ABSTRACT

In Italy, one student out of five, during his/her educational path from the early years of school up to University, faces difficulties in learning requiring the need of help by experts. This observation allows us affirming that, in Italian country, there are roughly 10 million students needing didactic support; among them, in particular, almost two million show the so-called Specific Learning Disorders (SLD). In this regard, this paper aims to identify and analyse a performing management strategy, in educational and social perspective, able to deal with the critical aspects relating to Specific Learning Disorders (SLD) in the main scholastic contexts such as School and University. Through a performance analysis of: data, laws and regulations, protocols of action and sources of literature, were detected a set of key determinants has been suggested to define and develop operational management solutions at different educational levels. An important result was that we identified in the sporting activity a tool of universal support able to achieve multiple benefits for supporting students with SLD. In fact, sport contributes significantly to the enhancement of the specific characteristics of these people, and the consequent increase in their self-esteem level and in their relational skills. This implies, in turn, a greater predisposition to school and university learning, favouring the overall development of the individual. **Key words:** Specific Learning Disorders; SLD; Educational management; Sport; School; University.

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INTRODUCTION

In Italy, one student out of five, during his/her educational path from the early years of school up to University, faces difficulties in learning requiring the need of help by experts. This observation allows us affirming that, in Italian country, there are roughly 10 million students needing didactic support; among them, in particular, almost two million show the so-called Specific Learning Disorders (SLD).

Therefore, it is necessary to specify the difference between learning "difficulty" and learning "disorder"; in the first case, we consider any difficulty met by a student during his/her school career, while the disorder refers to a more serious issue related to the learning process.

Students tend to face many and different types of difficulties at school, and these numerous difficulties are often not the consequence of a specific cause, but they are due to many factors concerning both the student and the context in which students are. With regard to the environment, it has been widely shown how that family and socio-cultural features, as well as the quality of the training provided, can influence the educational outcomes.

Instead, learning disorder concerns that part of students where the difficulty, particularly serious and constant over time, cannot be easily attributed to contextual or temporary factors.

Specifically for this reason, it is fundamental to frame a management strategy to deal with the problems found after the identification of specific learning disorders, in order to ensure an appropriate didactic path at all levels, and especially a personal growth for the individual.

The school and university context must avoid the occurrence of SLD individuals' exclusion situations, and propose operational programs which can ensure them an inclusive development both at educational and social level.

In that regard, it needs to point out that the sports industry can provide a substantial contribution for the social, educational and personal growth of SLD students.

METHOD

Analysis of: Data, Laws and Regulations, Protocols of action and Literature References

SLD, School and University

The incidence of difficulties found at school on the population that attends compulsory school is equal to an 18-19%, while, as for specifically that relating to cases of SLD students, ranges between the 4-6% (Bollani et al, 2017; Morlini & Scorza, 2017).

Specific learning disorders represent a significant difficulty in the written code control acquisition process (reading, writing, making computations), which interferes with the adaptive functioning in the absence of normal intellectual functioning and appropriate learning opportunities, and in the absence of neuro-motor disorders or (pre-existing) sensory/psychopathological disorders (D'Amico, 2016; Molle et al, 2016; Stella & Biancardi, 1999).

It is possible to define a diagnosis of a specific learning disorder when, in standard reading, writing and computation tests, the level of one or more of these three skills is at least two standard deviations below than

the average predictable results; in exchange, the reading and/or writing and/or computation age is at least two years less below than the subject's chronological and/or mental age, measured by standardized psychometric tests, despite adequate school training (Beitchman e Young, 1997; Cornoldi, 2007; Fletcher et al., 1994; Hammil, 1990). These disorders, among which we recognize dyslexia, dysgraphia, dyscalculia, and dysorthographia, are linked by specific isolated or combined neuropsychological dysfunctions.

In the SLD- 4 they are classified as disorders related to the reading, writing and computation process (Andreoli, Cassano & Rossi, 2007). In the ICD-10 they are included in the psychological development disorders as school skills specific disorders: specific disorders related to the reading, spelling and arithmetic skills, and disorders of mixed type (World Health Organization, 1992).

At this point, it is important to point out what are specifically the main SLD identified (Cornoldi, 1991; Kavale, Forness & Lorschach, 1991; Tressoldi & Vio, 1996):

- Dysgraphia: it is a specific difficulty realizing graphemes.
- Dysorthography: it is a specific disorder in writing correctly (transcription process between phonology and graphemic representation of the word, frequent grammatical and spelling mistakes).
- Dyslexia: it is a specific disorder in the reading speed and accuracy (automation of the symbols decoding process).
- Dyscalculia: it is a weakness in the structuring of the numerical cognition components (basal numeric intelligence, quantification mechanisms, etc.) and/or difficulties in the executive procedures (reading, writing, putting numbers in column) and/or difficulties in computation. Despite a standard IQ, the ability of these children to learn alphabetical and numeric codes remains limited.

This means that almost all SLD people manage to learn how to read, write and make computations, but not in such an automated way as their peers do. Moreover, there are also other less well-known diseases such as dyspraxia and dyssomnia. Dyspraxia is the difficulty in putting in sequence data, times, names, such as months, years, days of the week, or in remembering the succession of movements to do to "lace one's own shoes". Dyssomnia represents the difficulty in remembering and using names in a relevant way, and the limited ability to find the word that corresponds to the meaning the subjects intends to express.

In this regard, School and University work in relation to some major reference standards, which provide the basic guidelines on which to structure an appropriate management plan for these critical issues, including:

- Presidential Decree No. 275/99, "Regulations concerning the autonomy of educational institutions".
- Note of the Ministry of University and Research No. 26/A4 dated January 5, 2005, "Initiatives related to dyslexia".
- Note of the Ministry of Education no. 4674 of May 10, 2007 "Learning disorders - Operational guidelines".
- Guidelines for the kindergarten and first-cycle education curriculum - M.D. of July 31, 2007.
- Draft Law of May 19, 2009.
- Presidential decree No. 122 of June 22, 2009.
- Law No. 170 of October 8, 2010 New rules on specific learning disorders in school contexts".
- M.D. No. 5669 of July 12, 2011.
- Guidelines for the right to education of SEN students of 12 July 2011 (annexed to the M.D. No. 5669/2011).

More specifically, it should be noted that, according to Law No. 17/1999 integrating and amending the Framework Law No. 104/1992, all Universities are required to establish the figure of a Rector's Delegate for Disability, which manages the activation of supporting services of study and university life activities for students with disabilities and with SLDs, in order to offer them equal opportunities of education, study and participation in University activities.

SLD diagnosis criteria underlying an effective strategic programming

Before proposing and analysing a management approach hypothesis, in a didactic and educational perspective, to the problems resulting from the SLD in the school and University system, it is essential to figure out the way in which they are found. In fact, although not of specific competence of educators and teachers, the knowledge about the diagnostic criteria may represent, for these professionals, a fundamental tool for an early detection of the SLD, favouring the planning of immediate, and therefore more effective actions to be taken.

The diagnosis of dyslexia and dysorthographia cannot be made before the end of the second year of primary school. However, since the first year, important signs of discrepancy between general cognitive skills and acquisition of the reading and writing process can be detected as risk indicators (Stella & Biancardi, 1999).

Essential parameters for the diagnosis of dyslexia, in the clear verbal systems like the Italian language, are speed (measured as reading time of songs, words or syllables) and accuracy (measured as the number of reading and writing mistakes), which include at least two standard deviations with respect to the performance of readers of the same age, or prove to be two years below than their chronological age. The understanding of the text does not contribute to formulating the diagnosing of dyslexia, although providing useful information on the reader's performance (Cadirola et al, 2016; Cornoldi, 1991; 2007; Tressoldi and Vio, 1996).

Assessing the writing process requires assessing the dysorthographic and dysgraphic components. For the diagnosis of dysorthographia it needs to assess if the amount of spelling mistakes is such as to place the child's performance at two or more standard deviations below than the average of children attending the same school class; Instead, dysgraphia seems to result from motor performance disorder of dyspraxic order (Cornoldi, Augello & Tressoldi, 1999; Ferraboschi & Meini, 1992; Martini, 1998).

The diagnosis of dyscalculia may be made before the third year of primary school, though, in the first two years, discrepancies between global cognitive skills and learning of numerical computation may be revealed. The assessment refers mainly to the parameters of correctness and, above all, of speed. Mathematical Problem Solving efficiency contributes to the diagnosis of developmental dyscalculia, but appears related to the cognitive skills level (Baccaglioni-Frank & Bussi, 2016; Chiappini et al, 2016) or to the language skills level. For the dyscalculia different kinds of disabilities have been identified, affecting: numerical processing, namely the recognition of numeric symbols, the ability to reproduce them graphically and organize them into space; computation system through the use of procedures to perform mathematical operations; arithmetic problems solving involving data analysis and organization of the work plan (Cadirola et al, 2016).

Apparently, what we have analysed could be of exclusive use to those who relate, in the first didactic moments (and therefore at school) to SLD subjects, but it is instead fundamental that the ability to identify such a disorder is the quality of any educator at any level, including the university one, so as to break down the first emotional barriers in the teacher-student relationship and to avoid limiting the classification of the SLD student to the mere preventive delivery of the certificating documentation.

RESULTS AND DISCUSSION

Managing SLDs in the main Didactic-Educational contexts: School and University

Both the school and the university context need an effective management path able to limit the weak point of SLD students, and to promote and enhance their educational and social development in an inclusive system. In this regard, it is essential to set up an operative approach in educational institutions ensuring that SLD-diagnosed students can take advantage of appropriate dispensatory and compensatory measures of didactic flexibility. Among the essential compensatory tools, depending on the peculiarities of the disorder, are included (Bollani et al, 2017, Capuano, Storace & Ventriglia, 2013): table of the months, alphabet and various characters; Pythagorean table; table of measurements and geometrical formulas; calculator; recorder; computer with video-writing programs including spelling checker and speech synthesis. As for the dispensatory measures, while requiring an individual assessment of the extent and profile of the difficulty, it is essential to take into account the following possible operational manoeuvres (Bollani et al, 2017; Tressoldi & Vio, 2012; Turnbull, 1995):

- Dispensation from reading aloud, fast writing under dictation, use of the dictionary, mnemonic study of the tables;
- Dispensation, where necessary, from the study of the foreign language in written form;
- Programming of longer times for written tests and home study;
- Organization of scheduled oral tests;
- Evaluation of written and oral tests in ways that take into account the content and not the form.

Obviously, other tools may also be used during the school process, based on the student's development phases and the outcomes obtained; moreover, for the purposes of the effectiveness of the management actions, it is essential that the measures adopted (whether compensatory or dispensatory) are periodically subject to monitoring and evaluation based on the objectives pursued. At the same time, the teaching methodology used must include the provision of individualized and personalized didactics, with effective and flexible forms of school work that also take into account every subject's peculiar characteristics. Further aspects of considerable importance that must be taken into account in the management of the didactic and educational proposal, which do not neglect the goal of a social and inclusive development, are certainly (Bollani et al, 2017; Turnbull, 1995):

- Learning assessment phase;
- Increased communication and collaboration between family, school and health services during the education and training path.

In fact, SLD students must be provided with adequate forms of assessment and testing; it could often be useful to prepare a differentiated assessment both in written and oral tests, in ways that take into account the content and not the form; maybe mistakes, such as those related to the spelling, can be highlighted but not assessed, limiting a weak point due to the disorder but preserving learning. Assessment through the adoption of the compensatory and dispensatory methodological-didactic tools, deemed to be most appropriate, must be related to the students' abilities and difficulties so as to facilitate awareness of their abilities and the related improvements. During the assessment, therefore, the same methods applied to the didactics in the context of individualized and personalized planning are employed.

Then, as regards the increased collaboration among the SLD management stakeholders at school, they must aim both at fostering academic success and at preventing blocks in the students' learning process, by facilitating their full social and cultural integration and reducing educational and emotional disadvantages for these subjects, thus favouring their complete education.

With reference to the university environment, it is important to specify that the services offered are provided in line with the resources made available both in the University budget and thanks to the funds from the Ministry of Education; everything is aimed exclusively at carrying out the educational and institutional activities, and by fully respecting the strategic objectives approved by the Academic Senate in respect of all the SLD students regularly enrolled in undergraduate courses, master's and PhD programs.

The main determiner on which effective management actions for these students should work are (Genovese et al, 2010; Ghidoni, Genovese & Guaraldi, 2015; Smith et al, 2015):

- *Welcome and Entry-level guidance.* The Guidance and Tutoring Sector should offer individualized interviews to encourage the conscious choice of one's own university path. Furthermore, an initial interview with the student could be envisaged to identify the types of support most suited to the needs, and related to the Specific Learning Disorder.
- *Classroom support.* Those who cannot pay attention and take notes autonomously during lessons should be able to request a classroom support service, specifying the type of support requested.
- *Technological didactic aids.* SLD students should have the possibility to request specific technological tools, necessary to guarantee and support a productive lesson attendance and a performing examination.
- *Individualized examinations.* SLD students should take the exams in an accessible way according to their needs, prior agreement with the teacher.
- *Material in accessible format.* Students should be able to request and obtain the didactic materials in an accessible format, according to their needs.
- *Tutoring.* The support of experts, whose goal is to make the SLD student progressively autonomous through the provision of information and strategies to solve any difficulties related to the university world, should be ensured. Therefore, tutors should carry out activities of accompaniment, classroom support, development of accessible material, intermediation with University structures and their teaching staff, recovery of educational material, etc. In addition, proposals for group didactics and peer tutoring could be encouraged as inclusive and educational methodological strategies.

Furthermore, it would be appropriate to structure a job orientation phase, perhaps in collaboration with the University Placement Service, to offer an integrated system of services aimed at supporting the SLD students in analysing their attitudes, motivations and competences, in order to elaborate a professional project consistent with their study course and its specific characteristics. In this way, the task of the university system would be fulfilled, since it would support these subjects (regardless of their weakness) in their active research of a job or in their choice to continue the post-graduate training, providing them with operative strategies and resources to realize their personal and professional objectives autonomously.

The universal support role of Sports for SLD Students

Students, and people in general, with Specific Learning Disorders often find difficulties in socializing within a peer group, as well as in motor coordination: it is therefore very important to create conditions for them to experience positive and socializing experiences, in contexts that are extracurricular and group like the sports one.

A problem that, however, puts SLD young people at disadvantage is due to the fact that, for practicing sports, it requires the direct intervention of attention system, motor coordination, posture control, and other often deficit aspects in these individuals. (Jelle Vuijk et al, 2011; Razuk & Barela, 2014; Westendorp et al, 2011).

Despite this may lead us to think that playing sports can be a highly unsuccessful and counterproductive experience for a SLD child, it is important to take into account two fundamental factors:

- The specific characteristics of these people can represent unique and useful resources to make them excel in sports;
- The natural educational, social and inclusive potential of the sport these students could benefit from.

Regarding the first factor, SLD people often have an overall picture, a global perception, and can "interpret" the situations more widely. They think in a dynamic way, creating unusual connections that others can hardly develop, and have analytical skills, based on different perspectives from the traditional ones that lead them to face the "tasks" with different approaches and methods. In addition, very often, their learning modality is multidimensional, since it makes use of all the senses, and causes them to process information in a global, rather than sequential, way. They are creative and easily develop new ideas and solutions; this allows them better expressing their potential in a dynamic, constantly changing context, just like the one that takes shape during sports activities (Cornoldi, 1991, Ghidoni, Genovese & Guaraldi, 2015; Smith et al, 2015). Dyslexic athletes, such as the boxer and heavyweight champion Muhammad Ali, the great basketball players Michael Jordan and Magic Johnson, the rowing champion Steve Redgrave, represent concrete examples of what we have analysed.

The possibility for SLD children to gain success through sports is a very important aspect in terms of increase in self-esteem, since, in school contexts, they are unfortunately used to see mistrust by their teachers in their skills, and being able to "do something well" is a revenge of outstanding value.

Moreover, as for the second factor under analysis, sport plays a fundamental social role for its natural characteristics, representing a tool for education and an extraordinary catalyst of positive universal values. In fact, it is a motor of inclusion, participation and social aggregation, especially for subjects showing difficulties in other social contexts, such as school and university (Bailey, 2005, Di Palma, Ascione & Peluso Cassese, 2017; Di Palma et al, 2016; Peluso Cassese, Di Palma & Tafuri, 2017). Precisely because of this it is assumed that, for SLD students, practicing sports activity (regardless of the possibility of gaining the highest levels) can be an effective tool supporting the development of self-esteem, autonomy and interpersonal skills of these subjects, indispensable requisites for a consequent improvement of the didactic learning skills also in the school and university contexts.

CONCLUSIONS

School and university realities must be able to guarantee an effective teaching offer to all, especially to those who show objective and certified situations of difficulty, such as students with Specific Learning Disorders. Indeed, these subjects should be probably dedicated more attention and commitment in order to satisfy their pedagogical, educational, didactic and social goal that such institutional realities should always strive for.

In this regard, specific management perspectives have been proposed, in an educational key, which can favour an educational, and at the same time, social and inclusive development in the main contexts of the Italian education, from primary school to university.

Moreover, in the practice of sports by SLD students, an important tool has been identified in an environment that is not purely the strictly educational one, able to effectively foster personal growth. In fact, sport contributes significantly to the enhancement of the specific characteristics of these people, and the consequent increase in their self-esteem level and in their relational skills. This implies, in turn, a greater predisposition to school and university learning, favouring the overall development of the individual.

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